

Title (en)
BETA-QUARTZ-BASED GLASS-CERAMICS

Title (de)
AUF BETA-QUARZ BASIERTE GLASSKERAMIK

Title (fr)
VITROCERAMIQUE A BASE DE QUARTZ BETA

Publication
EP 0952966 A4 20000823 (EN)

Application
EP 97948215 A 19971107

Priority
• US 9720434 W 19971107
• US 3166296 P 19961121

Abstract (en)
[origin: WO9822405A1] Nanocrystalline glass-ceramic materials based on beta -quartz solid solution Mg-rich phases formed in the system SiO₂-Al₂O₃-MgO-Li₂O-TiO₂(ZnO, BaO, ZrO₂, P₂O₅). Articles made from the glass-ceramic materials exhibit a crystal phase assemblage of a fine-grained, microstructure which is predominantly beta -quartz, and at least one additional phase selected from enstatite and spinel, and having a composition which consists essentially of, in weight percent on the oxide basis, 40-65 % SiO₂, 10-40 % Al₂O₃, 5-25 % MgO, 0.5-4 % Li₂O, 5-15 % TiO₂, and up to 5 % ZrO₂, such that the sum of (TiO₂ + ZrO₂) is at least 9 %. The glass-ceramide article is particularly useful for memory disk applications.

IPC 1-7
C03C 10/02; **C03C 10/04**; **C03C 10/14**

IPC 8 full level
C03C 10/00 (2006.01); **C03C 10/02** (2006.01); **C03C 10/04** (2006.01); **C03C 10/14** (2006.01); **G11B 5/72** (2006.01); **G11B 5/73** (2006.01); **G11B 5/84** (2006.01); **G11B 23/00** (2006.01)

CPC (source: EP KR US)
C03C 10/00 (2013.01 - KR); **C03C 10/0027** (2013.01 - EP US); **C04B 35/14** (2013.01 - EP US); **C04B 35/195** (2013.01 - EP US); **C04B 35/20** (2013.01 - EP US); **G11B 5/73921** (2019.04 - EP US); **G11B 5/8404** (2013.01 - EP US); **G11B 23/0064** (2013.01 - EP US); **C04B 2235/32** (2013.01 - EP US); **C04B 2235/3203** (2013.01 - EP US); **C04B 2235/3206** (2013.01 - EP US); **C04B 2235/3215** (2013.01 - EP US); **C04B 2235/3217** (2013.01 - EP US); **C04B 2235/3222** (2013.01 - EP US); **C04B 2235/3232** (2013.01 - EP US); **C04B 2235/3244** (2013.01 - EP US); **C04B 2235/3284** (2013.01 - EP US); **C04B 2235/36** (2013.01 - EP US); **C04B 2235/72** (2013.01 - EP US); **C04B 2235/785** (2013.01 - EP US); **C04B 2235/80** (2013.01 - EP US); **C04B 2235/96** (2013.01 - EP US); **C04B 2235/9607** (2013.01 - EP US); **G11B 23/0021** (2013.01 - EP US)

Citation (search report)
• [X] JP H0421543 A 19920124 - HOYA CORP
• [X] GB 940403 A 19631030 - CORNING GLASS WORKS
• See references of WO 9822405A1

Cited by
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